

SIMATIC ET 200SP, digital output module, DQ 4x 24VDC/2A  
 Standard, suitable for BU type A0, Color code CC02, Module  
 diagnostics



General information	
Product type designation	DQ 4x24 V DC/2 A ST
Firmware version	V1.1
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	Yes
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC02
Product function	
<ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated as of version</li> </ul>	V11 SP2 / V13
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated as of version</li> </ul>	V5.5 SP3 / -
<ul style="list-style-type: none"> <li>PCS 7 configurable/integrated as of version</li> </ul>	V8.1 SP1
<ul style="list-style-type: none"> <li>PROFIBUS as of GSD version/GSD revision</li> </ul>	GSD Revision 5
<ul style="list-style-type: none"> <li>PROFINET as of GSD version/GSD revision</li> </ul>	GSDML V2.3
Operating mode	
<ul style="list-style-type: none"> <li>DQ</li> </ul>	Yes
<ul style="list-style-type: none"> <li>DQ with energy-saving function</li> </ul>	No

• PWM	No
• Oversampling	No
• MSO	No
<b>Redundancy</b>	
• Redundancy capability	Yes
<b>Supply voltage</b>	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
<b>Input current</b>	
Current consumption, max.	60 mA; without load
<b>Output voltage</b>	
Rated value (DC)	24 V
<b>Power loss</b>	
Power loss, typ.	1 W
<b>Address area</b>	
Address space per module	
• Address space per module, max.	1 byte; + 1 byte for QI information
<b>Digital outputs</b>	
Type of digital output	Source output (PNP, current-sourcing)
Number of digital outputs	4
Current-sinking	No
Current-sourcing	Yes
Short-circuit protection	Yes
• Response threshold, typ.	2.8 to 5.2 A
Limitation of inductive shutdown voltage to	Typ. L+ (-50 V)
Controlling a digital input	Yes
<b>Switching capacity of the outputs</b>	
• with resistive load, max.	2 A
• on lamp load, max.	10 W
<b>Load resistance range</b>	
• lower limit	12 $\Omega$
• upper limit	3 400 $\Omega$
<b>Output current</b>	
• for signal "1" rated value	2 A
• for signal "0" residual current, max.	0.1 mA
<b>Output delay with resistive load</b>	
• "0" to "1", typ.	50 $\mu$ s
• "0" to "1", max.	50 $\mu$ s

• "1" to "0", typ.	100 µs
• "1" to "0", max.	100 µs
<b>Parallel switching of two outputs</b>	
• for uprating	No
• for redundant control of a load	Yes
<b>Switching frequency</b>	
• with resistive load, max.	100 Hz
• with inductive load, max.	2 Hz
• on lamp load, max.	10 Hz
<b>Total current of the outputs</b>	
• Current per channel, max.	2 A
• Current per module, max.	8 A
<b>Total current of the outputs (per module)</b>	
<b>horizontal installation</b>	
— up to 30 °C, max.	8 A
— up to 40 °C, max.	8 A
— up to 50 °C, max.	6 A
— up to 60 °C, max.	4 A
<b>vertical installation</b>	
— up to 30 °C, max.	8 A
— up to 40 °C, max.	6 A
— up to 50 °C, max.	4 A
— up to 60 °C, max.	4 A
<b>Cable length</b>	
• shielded, max.	1 000 m
• unshielded, max.	600 m
<b>Isochronous mode</b>	
Isochronous operation (application synchronized up to terminal)	No
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
Substitute values connectable	Yes
<b>Alarms</b>	
• Diagnostic alarm	Yes
<b>Diagnostic messages</b>	
• Monitoring the supply voltage	Yes
• Wire-break	Yes; Module-wise
• Short-circuit	Yes; Module-wise
• Group error	Yes
<b>Diagnostics indication LED</b>	
• Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED

- Channel status display
- for channel diagnostics
- for module diagnostics

Yes; Green LED  
 No  
 Yes; green/red DIAG LED

### Potential separation

#### Potential separation channels

- between the channels
- between the channels and backplane bus

No  
 Yes

### Isolation

Isolation tested with 707 V DC (type test)

### Dimensions

Width 15 mm  
 Height 73 mm  
 Depth 58 mm

### Weights

Weight, approx. 30 g

**last modified:** 04/23/2018